Instruction: Express each of the following as a single fraction in its lowest terms.

1. $\boxed{\frac{2x}{y}}$

2. $\frac{(m-n)^2}{m^2-n^2} = \frac{(m-n)^2}{(m+n)(m-n)} = \boxed{\frac{m-n}{m+n}}$

3. $\boxed{\frac{q}{p-q}}$

4. $\boxed{-\frac{4}{u}}$

5. $\boxed{\text{Does Not Simplify}}$

6. $$\begin{aligned}\frac{4}{2x+4} + \frac{8}{x^2-4} &= \frac{4}{2(x+2)} + \frac{8}{(x+2)(x-2)} \\ &= \frac{2}{x+2} \cdot \frac{x-2}{x-2} + \frac{8}{(x+2)(x-2)} \\ &= \frac{2x-4}{(x+2)(x-2)} + \frac{8}{(x+2)(x-2)} \\ &= \frac{2x+4}{(x+2)(x-2)} \\ &= \frac{2(x+2)}{(x+2)(x-2)} \\ &= \boxed{\frac{2}{x-2}}\end{aligned}$$

7. $\boxed{\frac{2}{2x^2+x}}$

8. $\boxed{-\frac{1}{2x+4}}$

9.

$$\begin{aligned}
\frac{4x^2}{9-x^2}+\frac{2x}{x-3} &= \frac{4x^2}{(3+x)(3-x)}+\frac{2x}{-(3-x)} \\
&= \frac{4x^2}{(3+x)(3-x)}-\frac{2x}{3-x}\cdot\frac{3+x}{3+x} \\
&= \frac{4x^2}{(3+x)(3-x)}-\frac{6x+2x^2}{(3+x)(3-x)} \\
&= \frac{2x^2-6x}{(3+x)(3-x)} \\
&= \frac{2x(x-3)}{-(3+x)(x-3)} \\
&= \boxed{-\frac{2x}{3+x}}
\end{aligned}$$

10. $\boxed{\dfrac{x^2+3x-2}{x^2-3x-10}}$